



National Fire Protection Association

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February 20, 2013

Public Safety and Security Committee
Room 3600, Legislative Office Building
Hartford, CT 06106

Dear Committee Co-Chairs Dargan and Hartley and Members of the Public Safety and Security Committee;

My name is Robert Duval, and I am the New England Regional Director and Senior Fire Investigator for the National Fire Protection Association (NFPA). I am submitting this testimony on behalf of the NFPA to go on record with our support House Bill No. 6160 - AN ACT REQUIRING WORKING SMOKE AND CARBON MONOXIDE DETECTORS IN ALL RESIDENTIAL BUILDINGS AND PRIVATE DWELLINGS AT THE TIME TITLE IS TRANSFERRED.

NFPA is the world's leading advocate of fire prevention and an authoritative source on public safety. NFPA develops, publishes, and disseminates more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks. Many of NFPA's Codes and Standards are adopted and in use in the State of Connecticut.

I offer the following from the Executive Summary of the NFPA Report on Smoke Alarms in U.S. Home Fires (September, 2011) Smoke alarms have become such a common feature in U.S. homes that it is easy to take them for granted. Newspapers often report fires in which blaring smoke alarms alerted sleeping occupants to danger. These devices alert countless others to fires just as they are starting. Recent telephone surveys, including 2008 and 2010 surveys conducted for NFPA by Harris and a Consumer Product Safety Commission's (CPSC's) 2004-2005 survey found that 96-97% of the surveyed U.S. households reported having at least one smoke alarm.

Almost two-thirds of home fire deaths resulted from fires in properties without working smoke alarms. In 2005-2009, smoke alarms were present in almost three-quarters (72%) of reported home fires and sounded in half (51%) of the home fires reported to U.S. fire departments. {Homes include one- and two-family homes, apartments or other multi-family housing, and manufactured housing.} More than one-third (38%) of home fire deaths resulted from fires in which no smoke alarms were present at all. One-quarter (24%) of the deaths were caused by fires in properties in which smoke alarms were present but failed to operate. {Smoke alarm failures usually result from missing, disconnected, or dead batteries.} Smoke alarms operated in fires that caused roughly one-third (37%) of the deaths. One percent of the deaths resulted from fires that were too small to activate the smoke alarm.

When smoke alarms should have operated but did not do so, it was usually because batteries are missing, disconnected or dead.

(From the NFPA Report on Non-Fire Carbon Monoxide Incidents – March 2012)

Often called the silent killer, carbon monoxide is an invisible, odorless, colorless gas created when fuels (such as gasoline, wood, coal, natural gas, propane, oil, and methane) burn incompletely. In the home, heating and cooking equipment that burn fuel are potential sources of carbon monoxide. Vehicles or generators running in an attached garage can also produce dangerous levels of carbon monoxide.

During 2006-2010, an estimated 72,000 non-fire carbon monoxide incidents were reported to U.S. fire departments each year: These incidents have been increasing over time. The vast majority (94%) of these incidents occur in residential properties.

The installation and maintenance of working smoke and carbon monoxide alarms is an important factor in fire safety within residential properties. The proposed bill would allow a method to determine if functioning alarms are present in a residential property before citizens would occupy the dwelling.

I also submit NFPA Fact Sheets on Smoke and Carbon Monoxide Alarm for your reference.

Please contact me should you have any questions or need further information on this subject. I look forward to working with the Public Safety and Security Committee on this matter of fire and life safety.

Thank you.

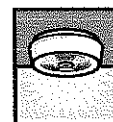
A handwritten signature in black ink, appearing to read 'RFD', followed by a long horizontal line and a circular flourish at the end.

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Smoke Alarms in Reported U.S. Home Fires



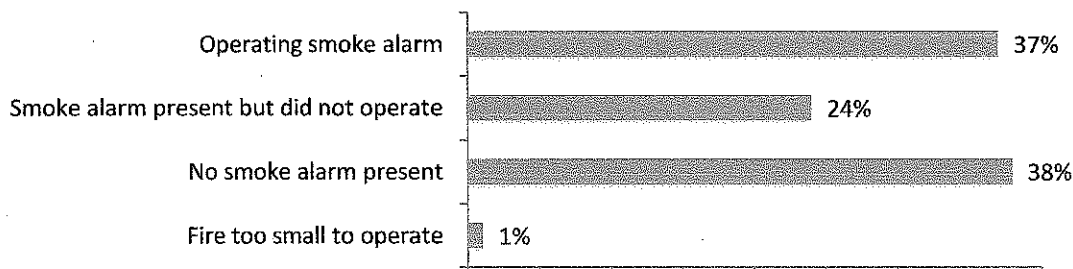
Ninety-six percent of all homes have at least one smoke alarm, according to a 2010 telephone survey. Overall, three-quarters of all U.S. homes have at least one *working* smoke alarm.

Smoke Alarm Presence and Performance

In 2005-2009, smoke alarms sounded in half of the home fires reported to U.S. fire departments.

- Almost two-thirds of home fire deaths resulted from fires in homes with no smoke alarms or no working smoke alarms.
 - No smoke alarms were present in more than one-third (38%) of the home fire deaths.
 - In one-quarter (24%) of the home fire deaths, smoke alarms were present but did not sound.

Home Structure Fire Deaths by Smoke Alarm Performance 2005-2009



Interconnected smoke alarms increase safety

in a Consumer Product Safety Commission (CPSC) survey of households with any fires, including fires in which the fire department was not called, interconnected smoke alarms were more likely to operate and alert occupants to a fire.¹ People may learn about or be alerted to a fire without hearing a smoke alarm.

- When smoke alarms (interconnected or not) were on all floors, they sounded in 37% of fires and alerted occupants in 15%.
- When smoke alarms were not on all floors, they sounded in only 4% of the fires and alerted occupants in only 2%.
- In homes that had interconnected smoke alarms, the alarms sounded in half (53%) of the fires and alerted people in one-quarter (26%) of the fires.



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Homes include one- and two-family dwellings, manufactured homes, apartments, townhouses, roughhouses, and condominiums.

Home Fires with Smoke Alarms

In reported home fires with smoke alarms:

- Half the alarms were powered by battery only.
- Two-thirds of the fatal fire injuries were caused by fires in homes with smoke alarms powered by battery only.

In fires considered large enough to activate the alarm,

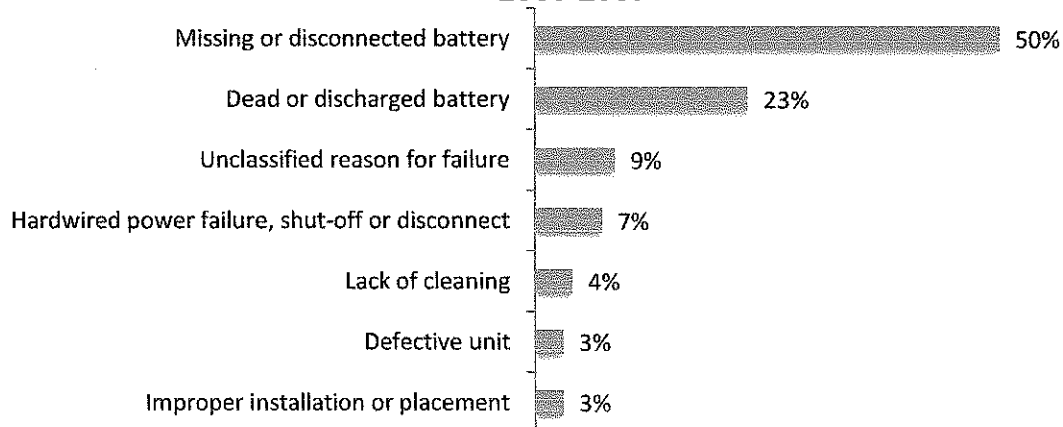
- Hardwired smoke alarms operated 92% of the time.
- Battery-powered smoke alarms operated in three-quarters (77%) of the fires.

Reasons that Smoke Alarms Did Not Operate

In reported home fires¹ in which the smoke alarms were present but did not operate,

- Half of the smoke alarms had missing or disconnected batteries. Nuisance alarms were the leading reason for disconnected smoke alarms.
- Almost one-quarter (23%) of the smoke alarm failures was due to dead batteries.
- Only 7% of the failures were due to hardwired power source problems, including disconnected smoke alarms, power outages, and power shut-offs.

Reason Smoke Alarm Failed to Operate in Home Structure Fires 2005-2009



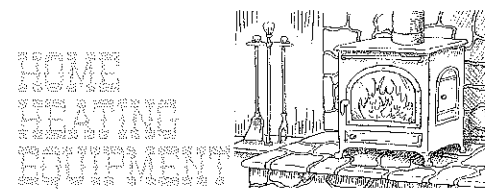
Little causal detail is required about certain categories of minor fires, identified by incident type and collectively called confined fires by the U.S. Fire Administration's National Fire Incident Reporting System (NFIRS). Confined fires were omitted from calculations of the reasons for smoke alarm failure.

Carbon Monoxide Safety



Often called the silent killer, carbon monoxide is an invisible, odorless, colorless gas created when fuels (such as gasoline, wood, coal, natural gas, propane, oil, and methane) burn incompletely. In the home, heating and cooking equipment that burn fuel can be sources of carbon monoxide.

- » CO alarms should be installed in a central location outside each sleeping area and on every level of the home and in other locations where required by applicable laws, codes or standards. For the best protection, interconnect all CO alarms throughout the home. When one sounds, they all sound.
- » Follow the manufacturer's instructions for placement and mounting height.
- » Choose a CO alarm that has the label of a recognized testing laboratory.
- » Call your local fire department's non-emergency number to find out what number to call if the CO alarm sounds.
- » Test CO alarms at least once a month; replace them according to the manufacturer's instructions.
- » If the audible trouble signal sounds, check for low batteries. If the battery is low, replace it. If it still sounds, call the fire department.
- » If the CO alarm sounds, immediately move to a fresh air location outdoors or by an open window or door. Make sure everyone inside the home is accounted for. Call for help from a fresh air location and stay there until emergency personnel.
- » If you need to warm a vehicle, remove it from the garage immediately after starting it. Do not run a vehicle or other fueled engine or motor indoors, even if garage doors are open. Make sure the exhaust pipe of a running vehicle is not covered with snow.
- » During and after a snowstorm, make sure vents for the dryer, furnace, stove, and fireplace are clear of snow build-up.
- » A generator should be used in a well-ventilated location outdoors away from windows, doors and vent openings.
- » Gas or charcoal grills can produce CO — only use outside.



Have fuel-burning heating equipment and chimneys inspected by a professional every year before cold weather sets in. When using a fireplace, open the flue for adequate ventilation. Never use your oven to heat your home.

FACTS

- ❗ A person can be poisoned by a small amount of CO over a longer period of time or by a large amount of CO over a shorter amount of time.
- ❗ In 2005, U.S. fire departments responded to an estimated 61,100 non-fire CO incidents in which carbon monoxide was found, or an average of seven calls per hour.



Your Source for SAFETY Information

NFPA Public Education Division • 1 Batterymarch Park, Quincy, MA 02169

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